IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method performed by a mobile station in a wireless network, the method comprising:

determining a power savings level for the mobile station based on an amount of data traffic as a percentage of traffic activity in a current time interval;

determining, from the power savings level, a desired sleep interval expressed as a plurality of 802.11 compliant beacon intervals;

determining a next broadcast time from a broadcast interval expressed as a plurality of 802.11 compliant beacon intervals; and

comparing the desired sleep interval and a time period until the next broadcast time to determine a wake-up time, wherein the wake-up time is set to the end of the desired sleep interval if at least two desired sleep intervals exist before the next broadcast time.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The method of claim 1 wherein the next broadcast time corresponds to a time to receive broadcast and multicast packets.

5. (Canceled)

6. (Previously Presented) The method of claim 1 wherein the method is performed within a beacon monitor task run in response to an interrupt caused by a Target Beacon Transmission Times (TBTT) timer.

7. (Previously Presented) The method of claim 1 wherein determining a next broadcast time comprises examining a Delivery Traffic Indication Message (DTIM) count within a received beacon.

8. (Currently Amended) A method comprising:

determining a desired sleep interval as a plurality of 802.11 compliant beacon intervals to sleep to save power, based on a volume of data traffic as a percentage of a current time interval;

determining a broadcast time to wake up to receive packets from an access point;

setting a wake-up time based on the desired sleep interval and the broadcast time, wherein setting a wake-up time comprises setting the wake-up time to the end of one desired sleep interval when the broadcast time is more than two desired sleep intervals in the future;

sleeping until the wake-up time;

waking to receive an 802.11 compliant beacon; and

if no 802.11 compliant beacon is received, sleeping for one additional 802.11 compliant beacon interval.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Original) The method of claim 8 wherein determining a broadcast time comprises examining a Traffic Indication Map (TIM) element within an 802.11 compliant beacon.

13. (Canceled)

14. (Original) The method of claim 8 wherein setting a wake-up time comprises setting the wake-up time to the broadcast time when the broadcast time is less than two desired sleep intervals in the future.

15. (Currently Amended) An apparatus having a machine-readable medium with instructions stored thereon that when accessed, result in a machine performing:

evaluating traffic activity at a mobile station in a wireless network;

setting a power savings level for the mobile station based on the traffic activity;

determining a desired sleep interval from the power savings level, wherein the desired sleep interval is expressed as a plurality of beacon intervals;

determining a next broadcast time for the mobile station to be awake to receive broadcast packets;

setting a sleep time associated with the desired sleep interval and the next broadcast time, wherein setting a sleep time comprises setting the sleep time to one desired sleep interval when the next broadcast time is more than two desired sleep intervals in the future;

putting the mobile station to sleep for the sleep time;

waking up the mobile station to receive a beacon signal; and

if the beacon signal is not received, putting the mobile station to sleep for one beacon interval.

16. (Original) The apparatus of claim 15 wherein evaluating traffic activity comprises determining a percentage of traffic timer over a time interval.

17. (Original) The apparatus of claim 16 wherein the power savings level may be set differently each time the traffic activity is evaluated.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) The apparatus of claim 15 wherein setting a sleep time comprises determining a number of beacon intervals for the mobile station to sleep by comparing the desired sleep interval with a Delivery Traffic Indication Message (DTIM) count.

21. (Currently Amended) An apparatus configured to communicate in an 802.11 wireless network, ~~to sleep for a plurality of beacon intervals based on traffic volume, to awake to receive a beacon, and to sleep for one additional beacon interval if a beacon is not received.~~ to determine a desired sleep interval expressed as a plurality of 802.11 compliant beacon intervals, to determine a next broadcast time from a broadcast interval expressed as a plurality of 802.11 compliant beacon intervals, and to compare the desired sleep interval and a time period until the next broadcast time to determine a wake-up time, wherein the wake-up time is set to the end of the desired sleep interval if at least two desired sleep intervals exist before the next broadcast time.

22. (Original) The apparatus of claim 21 comprising a network interface card.

23. (Original) The apparatus of claim 21 comprising a mobile computer.

24. (Currently Amended) An electronic system comprising:

a plurality of antennas;

a radio interface coupled to the plurality of antennas;

a processor coupled to the radio interface; and

a static random access memory with instructions stored thereon that when accessed, result in the processor performing:

evaluating traffic activity at the radio interface, setting a power savings level for the radio interface based on the traffic activity, determining a desired sleep interval based on the power savings level, wherein the desired sleep interval is expressed as a plurality of beacon intervals; determining a next broadcast time; setting a sleep time associated with the desired sleep interval and the next broadcast time, wherein setting a sleep time comprises setting the sleep time to one desired sleep interval when the next broadcast time is more than two desired sleep intervals in

the future, putting the radio interface to sleep for the sleep time, waking the radio interface to receive a beacon signal, and putting the radio interface back to sleep for one beacon interval if a beacon signal is not received.

25. (Canceled)

26. (Canceled)

27. (Canceled)